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CLAIMS

1. Engine system, comprising at least a first volumetric device, and a second volumetric device in which said second volumetric device is larger in volume than said first volumetric device, in which, during continuous flow of a compressible fluid from said first to said second volumetric device work is performed.

2. Engine system according to claim 1, further comprising a turbine driven by the fluid discharged from the second volumetric device.

3. Engine system according to claim 1, which comprises:

a) a first volumetric device;

b) means for feeding a compressible fluid to said first volumetric device via the corresponding independent flow path;

c) a heat source for each independent flow path;

d) means for driving said first volumetric device for sequentially transferring controlled volumes of said fluid to the corresponding heat source by positive displacement cycles;

e) a second volumetric device for receiving heated controlled volumes of said fluid from the corresponding heat source via the corresponding independent flow path;

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f) means for driving said second volumetric device for sequentially discharging said heated controlled volumes of said fluid by positive displacement cycles; and

g) means for synchronizing said means for driving said first and second volumetric device.

4. Engine system according to claim 3, wherein the means for synchronizing the means for driving the first and second volumetric devices comprise a ~~common shaft supporting said first and second volumetric devices for~~ rotation.

5. Engine system according to claim 3, wherein the means for feeding a compressible fluid to a first volumetric device include a compressor.

6. Engine system according to claim 2, wherein the discharge of the second volumetric device is the inlet of the turbine.

7. Engine system according to claim 3, wherein the heat sources are combustors fed with a fuel, which receive controlled volumes of fluid and cause said fuel to burn, thereby heating and expanding said fluid.

8. Engine system according to claim 3, wherein the first and second volumetric devices are keyed to the same main shaft.

9. Engine system according to claim 8, comprising a compressor keyed to the main shaft.

10. Engine system according to claim 8, comprising a turbine keyed to the main shaft.

11. Engine system according to claim 1 or 3, wherein the compressible fluid is air.

12. Engine system according to claim 3, wherein the heat source is a combustion chamber into which fuel is injected and the compressible fluid is air.

13. Engine system according to claim 3, wherein the positive displacement cycle is effected by means of apparatus selected from the group consisting of rotors provided with lobes, Wankel mechanism, reciprocating piston systems, or any common or specially designed volumetric mechanism.

14. Engine system according to claim 3, further comprising at least one compressor for increasing the pressure of each controlled volume of fluid.

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15. Engine system according to claim 14, further comprising at least one turbocharger.

16. Engine system according to claim 3, further comprising at least one stage of intercoolers.

17. Engine system according to claim 3, comprising two independent shafts to one of which are koyed the volumetric devices, a load being coupled to the other shaft.

18. Engine system according to claim 17, further comprising a clutch for engaging and disengaging the two independent shafts, depending on a magnitude of the load.

19. Engine system according to claim 15, further comprising a secondary heater.

20. Engine system according to claim 14, further comprising a second compressor and a first stage intercooler for cooling the discharge flowing from the first compressor to said second compressor.

21. Engine system according to claim 20, further comprising a turbocharger and a second stage intercooler for cooling the discharge flowing from the second compressor to the turbocompressor of the turbocharger.

22. Motor vehicle propulsion system comprising an engine system according to claim 3 and further comprising a secondary heater for heating exhaust from said system and a third volumetric device rotating about an independent shaft, wherein the discharge from said secondary heater is the working fluid of said third volumetric device, said third volumetric device being adapted to be a torque converter in response to a variable load coupled to said independent shaft, said engine system further comprising a rotational direction controller of said independent shaft by a valve means which directs said discharge from said secondary heater alternatively to an inlet port and an outlet port of said third volumetric device.

23. Motor vehicle propulsion system according to claim 22, further comprising a transmission comprising:

a) a plurality of coaxial volumetric dovices rotatable about the independent shaft;

b) a plurality of conduits through which the discharge from the secondary heater flows in parallel to each of said plurality of volumetric devices, respectively;

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c) a plurality of selector valves provided with each of said plurality of volumetric devices, respectively, for changing the rotational direction of the independent shaft by directing the flow through a corresponding conduit alternatively between the inlet port and outlet port of the corresponding volumetric device upon actuation of each of said selector valves in unison; and

d) a plurality of selector valves in communication with each of said conduits, respectively, for selecting through which combination of said plurality of volumetric devices discharge from the secondary combustor will flow,

wherein said motor vehicle propulsion system produces a maximum amount of torque when the discharge from the secondary combustors is directed to all of said plurality of volumetric devices in parallel, a lowered level of torque upon deactivation of at least one of said volumetric devices, and an increased level of torque upon activation of at least an additional one of said volumetric devices.

24. Motor vehicle propulsion system according to claim 22, further comprising a bypass valve to serve as engage and disengage device between the motor assembly and torque converter assembly so that torque converter can be repressed while the motor is operating.

25. Motor vehicle propulsion system according to claim 22, further comprising a heat source.

26. Turbofan engine system comprising an engine system according to claim 9, wherein the compressor is a turbocompressor driven by discharge from the expansion volumetric device and a fan driven by said engine system, said fan generating a crossfan streamline and a main thrust for an aircraft, exhaust from said turbocompressor being discharged to the atmosphere and providing auxiliary thrust in addition to said main thrust.

27. Turbojet engine system, comprising an engine system according to claim 9 and further comprising a main combustor generating a gas stream providing a main thrust for an aircraft.